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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/036,145      | 10/22/2001  | Brian B. Filippini   | 3141                | 4348             |

7590 07/13/2005

THE LUBRIZOL CORPORATION  
Patent Dept. -Patent Administrator-022B  
29400 Lakeland Boulevard  
Wickliffe, OH 44092-2298

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| EXAMINER |
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JOHNSON, JERRY D

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| ART UNIT | PAPER NUMBER |
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1764

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/036,145

Applicant(s)

FILIPPINI ET AL.

Examiner

Jerry D. Johnson

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13, 15-17, 19-22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13, 15-17, 19-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10, 13, 15-17, 19-22 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford in view of Forsberg and Schwab.

Ford, U.S. Patent 3,756,794, teach emulsified hydrocarbon fuels suitable for engines of aircraft (for example, jet or turbojet engines), cars (for example, gasoline engines) or trucks or ships (for example, diesel engines). The fuel thus includes diesel, gasoline and kerosene type distillate fuels boiling within the range 20-400/C. The hydrocarbon fuel component of the composition forms more than 75%, preferably more than 90% and more preferably more than 95% of the total composition by weight (column 1, lines 49-58). A wide range of emulsifiers can be employed in the composition (column 1, lines 65-66). The emulsified fuels can also contain a water soluble non-ash forming freezing point depressant. Compounds suitable for this purpose include ammonium salts (for example, ammonium nitrate) or polyols (for example, ethylene glycol or glycerol). Ammonium nitrate has been found to be particularly advantageous. The proportion of depressant may be 0.1% to 10% by weight but preferably is from 0.3% to 0.7% (column 2, lines 15-23). Supplemental additives can also be present. Examples of these are anticorrosion additives and antistatic additives. Glycerol and ethylene glycol are examples of anticorrosion agents. The amount of anticorrosion agent will usually be up to 1.0% by weight (column 2, lines 27-38). While Ford teaches that a wide range of emulsifiers can be employed, Ford differs from the instant claims in not disclosing the instantly claimed emulsifiers or organic nitrates.

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Forsberg, U.S. Patent 4,447,348, teaches carboxylic solubilizer/surfactant combinations and aqueous systems made from them. More particularly, the solubilizers are made from acylating agents having hydrocarbyl substituents of about 12 to about 500 carbon atoms and N-(hydroxyl-substituted hydrocarbyl) amines (column 1, lines 19-23). These acylating agents have at least one hydrocarbyl-based substituent of about 12 to about 500 carbon atoms. Generally, this substituent has an average of about 20, typically 30, to about 300 carbon atoms; often it has an average of about 50 to about 250 carbon atoms (column 3, lines 22-27). The reaction of the acylating agent with the hydroxyl amine can be carried out at temperatures ranging from about 30/ to the decomposition temperature of the reaction components and/or products having the lowest such temperature (column 8, lines 20-24). Often the reaction is carried out under ester-forming conditions and the product thus formed is, for example, an ester, salt, amide, imide, amic ester or mixture of such products (column 3, lines 27-30). In addition to the acylating agent there may also be present in the solubilizer-forming reaction mixture one or more lower molecular weight mono- or poly-carboxylic acid acylating agents of one to about less than 18 carbons such as fatty acids having 10 to about 18 carbon atoms or a tetrapropenyl-substituted succinic anhydride (column 8, lines 50-56). The surfactant can be of the cationic, anionic, nonionic or amphoteric type (column 10, lines 4-5). Of these surfactants, non-ionic surfactants are generally used (column 10, lines 13+). Ethylene oxide/propylene oxide block copolymers are useful non-ionic surfactants (column 10, lines 16-18). The solubilizer/surfactant combinations can be used to incorporate water into hydrocarbyl fuels such as diesel fuel (column 15, lines 19-21). Generally these fuel/water combinations contain about 0.2% to about

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25% solubilizer plus surfactant combination, about 2% to about 20% water with the balance being fuel and other conventional additives (column 15, lines 28-32).

Schwab, U.S. Patent 5,669,938, teaches that the addition of at least one fuel-soluble organic nitrate ignition improver to a water-in-oil emulsion provides important benefits for reduction of exhaust emissions from diesel engines (column 1, lines 33-39). Preferred are the alkyl nitrates having from 5 to 10 carbon atoms, most especially mixtures of primary amyl nitrates, mixtures of primary hexyl nitrates, and octyl nitrates such as 2-ethylhexyl nitrate (column 3, lines 13-16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the solubilizer/surfactant combination of Forsberg as the emulsifier in an emulsified hydrocarbon fuel as taught by Ford. Additionally, it would have been obvious to add the organic nitrate ignition improver of Schwab to the emulsified fuel as taught by Ford in order to reduce exhaust emissions from diesel engines operating on said fuel.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10, 13, 15-17, 19-22 and 24-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-10, 13, 15-17, 19-22 and 24-25 are rendered indefinite by the recitation "about 0.001% to about 15% by weight of the water soluble salt", i.e., these claims lack antecedent basis to recite "the water soluble salt". Accordingly, it is unclear what "the water soluble salt" refers to.

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Claim 22 improperly recites “wherein the hydrocarbon fuel is selected from the group consisting of a biodegradable fuel, a biodegradable fuel, .....”.

Applicant's arguments filed February 9, 2005 have been fully considered but they are not persuasive.

Applicants argue

[w]ith regard to a person skilled in the art combining the teachings of '794, '348 and '938, any resulting emulsified fuel invention would contain (a) an emulsion stabilizer from urea and formamide present from 0.3% to 0.7%; (b) about 1 to about 40 volume percent water; (c) an organic nitrate ignition improver; and (d) (i) a condensate of an alkylphenol and an alkyleneoxide; (ii) acylating agents having hydrocarbyl substituents of about 12 to about 500 carbon atoms; and (iii) N-(hydroxyl-substituted hydrocarbyl) amines. [sic] does not produce Applicants claimed invention because the combination of '794, '348 and '938 produces an invention requiring (i) a condensate of an alkylphenol and an alkyleneoxide; and (ii) an emulsion stabilizer from urea and formamide present from 0.3 % to 0.7 %; and Applicants claimed invention does not contain either of these compounds. (Remarks, pages 8 and 9).

Applicants' argument lacks merit.

Applicants' claims are “comprising” claims and as such do not exclude the presence of additional components. Furthermore, the teaching relied on are not limited to compositions containing the condensate of an alkylphenol and an alkyleneoxide as argued. Ford, U.S. Patent 3,756,794, teach that a wide range of emulsifiers can be employed in the composition (column 1, lines 65-66). Accordingly, absence unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the solubilizer/surfactant combination of Forsberg as the emulsifier in an emulsified hydrocarbon fuel as taught by Ford.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

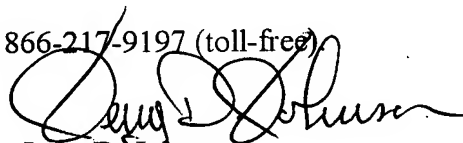
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry D. Johnson whose telephone number is (571) 272-1448. The examiner can normally be reached on 6:00-3:30, M-F, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry D. Johnson  
Primary Examiner  
Art Unit 1764